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| 09/847,719 | 05/02/2001 | Tadayoshi Nagaoka | 645-144 | 7027 |

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09/24/2003

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EXAMINER

OMGBA, ESSAMA

ART UNIT

PAPER NUMBER

3726

DATE MAILED: 09/24/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/847,719

Applicant(s)

NAGAOKA ET AL.

Examiner

Essama Omgba

Art Unit

3726

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 21-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 6, 7, 11, 12, 16, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Melvill (US Patent 2,405,594).

Melvill discloses a method for manufacturing a packing made of a three-dimensional net-like structure which constitutes an internal structure of a device which performs material transfer between gases and liquids, the internal structure being divided in a plurality of chambers connected to one another and the three dimensional structure being made of a plurality of unit structures which are arranged continuously in vertical and horizontal directions of the three dimensional net-like structure, each of the unit structures being formed of by converging and dispersion of the three or four line elements, each of the line elements extending from the top of the packing to the bottom of the packing, the method comprising the steps of forming a unit structure with three or four line elements, the unit structure consisting of a plurality of basic units each of which is a combination of two triangular or tetragonal pyramids having a common bottom surface and apexes disposed in opposite directions, the basic units being arranged continuously in vertical direction of the three-dimensional net-like structure with apexes

Art Unit: 3726

of each of the basic units being in contact with apexes of adjacent basic units, and a converging section of the three or four line elements being formed by binding the three or four line elements at a point of contact of the apexes of the adjacent basic units and disposing a plurality of the unit structures in such a manner that adjacent ones of the unit structures come into contact with each other so that the adjacent one of the unit structures are in a position to form the converging section of the three or four line elements at each apex of the common bottom surface of the triangular or tetragonal pyramids constituting the basic unit, and forming the converging section of the three or four line elements by binding the three or four line elements at each point of contact of the adjacent ones of the unit structures, see column 1, lines 23-55, column 2, lines 1-33, column 3, lines 43-46; column 4, lines 37-75, column 5, lines 50-52, column 7, lines 16-38 and column 8, lines 38-44. Applicant should note that the unit structures of Melvill could be used as mist eliminator.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-5, 8-10, 13-15 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Melvill.

Art Unit: 3726

Melvill discloses a method for manufacturing a packing as shown above, the converging section of the three or four line elements being formed by binding the line elements by a weld or other means, see column 8, lines 38-44. Although Melvill does not specifically disclose the binding being by means of wire, clip or adhesive, however it is within the general knowledge of one of ordinary skill in the art to appropriately bind the line elements as suggested by the "otherwise" language disclosed by Melvill. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made that binding the line elements of Melvill with wire, clip or adhesive is an obvious matter of design choice wherein no stated problem is solved or unexpected results obtained in binding the line elements one way or another as long as the line elements are effectively bound.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Art Unit: 3726

Claims 1-20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,481,325 in view of Melvill (US Patent 2,405,594).

Claim 1 of U.S. Patent 6,481,325 discloses a method for manufacturing as claimed by claims 1-20 of the instant application except for the line elements extending from the top of the packing to the bottom of the packing, the line elements being bound by means of wire, a clip or an adhesive, forming the unit structure with four line elements, the unit structure consisting of a plurality of basic units each of which is a combination of two triangular or quadruple pyramids having a common bottom surface and apexes disposed in opposite directions, the basic units being arranged continuously in vertical direction of the three-dimensional net-like structure with apexes of each of the basic units being in contact with apexes of adjacent basic units, and a converging section of the three or four line elements being formed by binding the three or four line elements at a point of contact of the apexes of the adjacent basic units and disposing a plurality of the unit structures in such a manner that adjacent ones of the unit structures come into contact with each other so that the adjacent one of the unit structures are in a position to form the converging section of the three or four line elements at each apex of the common bottom surface of the triangular or quadruple pyramids constituting the basic unit. However Melvill teaches forming such basic unit with the line elements extending from the top of the packing to the bottom of the packing, see column 1, lines 23-55, column 2, lines 1-33, column 3, lines 43-46, column 4, lines 37-75, column 5, lines 50-52, column 7, lines 16-38 and column 8, lines 38-44. Therefore it would have

Art Unit: 3726

been obvious to one of ordinary skill in the art at the time the invention was made, to have manufactured the packing of US Patent 6,481,325 with three or four line elements extending from the top of the packing to the bottom of the packing with the basic units being arranged in the manner taught by Melvill, in order to feed and spread out the liquid in a regular predetermined symmetrical manner so that even distribution of the liquid throughout the flow area is achieved. Melvill discloses binding the line elements by a weld or other means, see column 8, lines 38-44. Although Melvill does not specifically disclose the binding being by means of wire, clip or adhesive, however it is within the general knowledge of one of ordinary skill in the art to appropriately bind the line elements as suggested by the "otherwise" language disclosed by Melvill. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made that binding the line elements of Melvill with wire, clip or adhesive is an obvious matter of design choice wherein no stated problem is solved or unexpected results obtained in binding the line elements one way or another as long as the line elements are effectively bound.

Claims 6-10 and 16-20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,536,323 in view of Melvill.

Claim 1 of U.S. Patent 6,481,325 discloses a method for manufacturing as claimed by claims 1-20 of the instant application except for the line elements extending from the top of the packing to the bottom of the packing, the line elements being bound by means of wire, a clip or an adhesive, the unit structure consisting of a plurality of

Art Unit: 3726

basic units each of which is a combination of two quadruple pyramids having a common bottom surface and apexes disposed in opposite directions, the basic units being arranged continuously in vertical direction of the three-dimensional net-like structure with apexes of each of the basic units being in contact with apexes of adjacent basic units, and a converging section of the four line elements being formed by binding the four line elements at a point of contact of the apexes of the adjacent basic units and disposing a plurality of the unit structures in such a manner that adjacent ones of the unit structures come into contact with each other so that the adjacent one of the unit structures are in a position to form the converging section of the four line elements at each apex of the common bottom surface of quadruple pyramids constituting the basic unit. However Melvill teaches forming such basic unit with the line elements extending from the top of the packing to the bottom of the packing, see column 1, lines 23-55, column 2, lines 1-33, column 3, lines 43-46, column 4, lines 37-75, column 5, lines 50-52, column 7, lines 16-38 and column 8, lines 38-44. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have manufactured the packing of US Patent 6,481,325 with four line elements extending from the top of the packing to the bottom of the packing with the basic units being arranged in the manner taught by Melvill, in order to feed and spread out the liquid in a regular predetermined symmetrical manner so that even distribution of the liquid throughout the flow area is achieved. Melvill discloses binding the line elements by a weld or other means, see column 8, lines 38-44. Although Melvill does not specifically disclose the binding being by means of wire, clip or adhesive, however it is within the

Art Unit: 3726

general knowledge of one of ordinary skill in the art to appropriately bind the line elements as suggested by the "otherwise" language disclosed by Melvill. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made that binding the line elements of Melvill with wire, clip or adhesive is an obvious matter of design choice wherein no stated problem is solved or unexpected results obtained in binding the line elements one way or another as long as the line elements are effectively bound.

Response to Arguments

6. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 3726

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

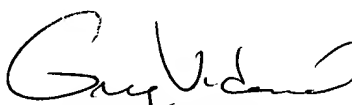
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Essama Omgba whose telephone number is (703) 305-2915. The examiner can normally be reached on M-F (10-7:30) First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Vidovich can be reached on (703) 308-1513. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

eo *20*
September 15, 2003


GREGORY VIDOVICH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700